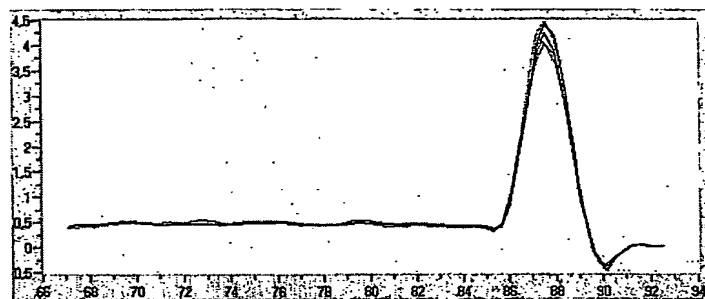
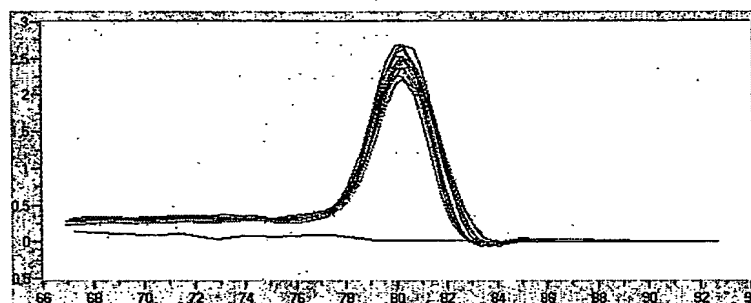


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**FIGURE 1a**



**FIGURE 1b**



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FIGURE 2

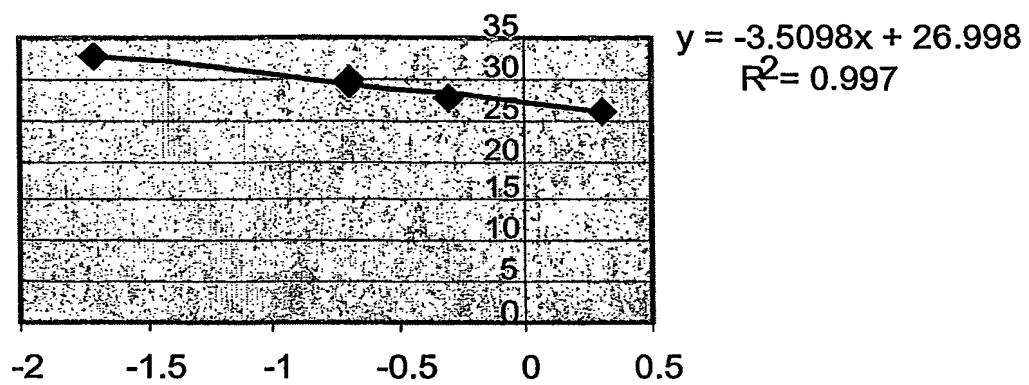
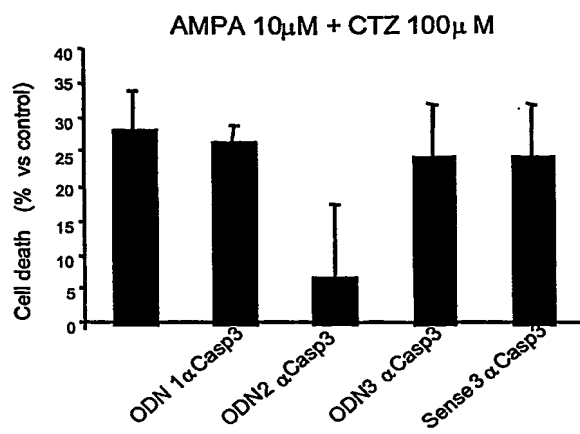
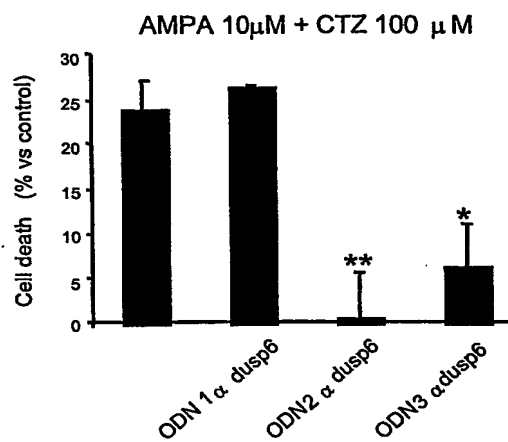


FIGURE 3

**a****b**

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FIGURE 4

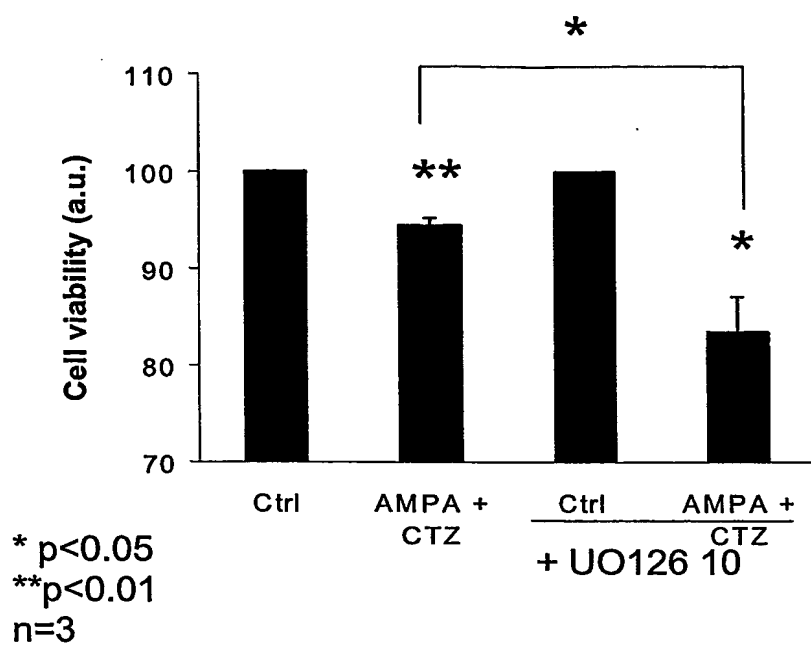


FIGURE 5

86.713% identity (88.783% ungapped) in 1716 nt overlap  
(172-1875:189-1876)

|       |   |       |       |       |       |       |
|-------|---|-------|-------|-------|-------|-------|
|       | 150   | 160   | 170   | 180   | 190   | 200   |
| human | CACTAAGAGCCAGCGCTGCAGCTGGTGCAGAGAGAACCCTCCGGCTTTGACTTCTGTCTCG |       |       |       |       |       |
|       |   |       |       | ::::  | :     | :     |
| rat   | GATTCATTGACTCTGAGAGTGATCTGGTGCAGAGGGACCACCGCTTGGCTTCTG--TCG   |       |       |       |       |       |
|       | 160   | 170   | 180   | 190   | 200   | 210   |
| human | 210   | 220   | 230   | 240   | 250   | 260   |
|       | TCTGCCCAAGGCCGCTAGCCTCGGCTTGGGAAGGCGAGGCGGAATTAAACCCCGCTCCG   |       |       |       |       |       |
|       | ::  | :::   | :::   | :::   | :::   | :::   |
| rat   | CCTTCCCTAA--CCGCTAGCTTCGGCTTGGGAA----AGGCCGAATCAAACCCCGCTCCG  |       |       |       |       |       |
|       | 220   | 230   | 240   | 250   | 260   | 270   |
| human | 270   | 280   | 290   | 300   | 310   | 320   |
|       | AGAG-CGCACGTTGCGCGCGGTGCGTGGCCATTGCCTGCCCCGAGGGGCGTCTGGTAG    |       |       |       |       |       |
|       | ::::  | ::    | :     | :::   | :     | :     |
| rat   | AGAGCCGGAGCTTCTCACGGCTTGC-TTGGCCTATGCCTGCCTCGAGGGGCGTCTGCTAG  |       |       |       |       |       |
|       | 280   | 290   | 300   | 310   | 320   |       |
| human | 330   | 340   | 350   | 360   | 370   | 380   |
|       | GCACCCCGCCCTCTCCGCGAGCTCGACCCCATGATAGATACGCTCAGACCCGTGCCCTT   |       |       |       |       |       |
|       | :::::   | ::::: | ::::: | ::::: | ::::: | ::::: |
| rat   | GCACCCCGCCTTCTCCTGCAGCTCGACCCCATGATAGATACGCTCAGACCCGTGCCCTT   |       |       |       |       |       |
|       | 330   | 340   | 350   | 360   | 370   | 380   |
| human | 390   | 400   | 410   | 420   | 430   | 440   |
|       | CGCGTCGGAAATGGCGATCAGCAAGACGGTGGCGTGGCTCAACGAGCAGCTGGAGCTGGG  |       |       |       |       |       |
|       | :::::   | ::::: | ::::: | ::::: | ::::: | ::::: |
| rat   | CGCGTCGGAAATGGCGATCAGCAAGACGGTGGCGTGGCTCAACGAGCAGCTGGAGCTGGG  |       |       |       |       |       |
|       | 390   | 400   | 410   | 420   | 430   | 440   |
| human | 450   | 460   | 470   | 480   | 490   | 500   |
|       | CAACGAGCGGCTGCTGCTGATGGACTGCCGCGCGCAGGAGCTATACGAGTCGTCGCACAT  |       |       |       |       |       |
|       | :::::   | ::::: | ::::: | ::::: | ::::: | ::::: |
| rat   | CAACGAACAGCTGCTGCTGATGGACTGCCGACCGCAGGAGCTGTACGAGTCGTCGCACAT  |       |       |       |       |       |
|       | 450   | 460   | 470   | 480   | 490   | 500   |
| human | 510   | 520   | 530   | 540   | 550   | 560   |
|       | CGAGTCGGCCATCAACGTGGCCATCCCGGGCATCATGCTGCGGCGCCTGCAGAAGGGTAA  |       |       |       |       |       |
|       | :::   | ::    | ::::: | ::::: | ::::: | ::::: |
| rat   | CGAATCTGCCATCAACGTGGCCATCCCGGGCATCATGCTGCGGCGTCTGCAGAAGGGCAA  |       |       |       |       |       |
|       | 510   | 520   | 530   | 540   | 550   | 560   |
| human | 570   | 580   | 590   | 600   | 610   | 620   |
|       | CCTGCCGGTGCGCGCGCTCTTACGCGCGGCGAGGACCGGGACCGCTTCACCCGGCGCTG   |       |       |       |       |       |
|       | :::::   | ::::: | ::::: | ::::: | ::::: | ::::: |
| rat   | CCTGCCGGTGCGCGCGCTATTACGCGCTGCGAGGACCGGGACCGCTTTACAGGCGCTG    |       |       |       |       |       |
|       | 570   | 580   | 590   | 600   | 610   | 620   |
| human | 630   | 640   | 650   | 660   | 670   | 680   |
|       | TGGCACCGACACAGTGGTGCTCTACGACGAGAGCAGCAGCGACTGGAACGAGAATACGGG  |       |       |       |       |       |
|       | :::::   | ::::: | ::::: | ::::: | ::::: | ::::: |
| rat   | CGGCACCGACACCGTGGTGCTCTACGACGAGAACAGCAGCGACTGGAATGAGAACACAGG  |       |       |       |       |       |
|       | 630   | 640   | 650   | 660   | 670   | 680   |





|       | 1760  | 1770                          | 1780              | 1790         | 1800         |      |
|-------|---|-------------------------------|-------------------|--------------|--------------|------|
| human | CATGCAGGGACTGGGATT  | CGAGGACTTCCAG---              | GCGCATAGGGT       | TAGAACCAAT   | GATAG        |      |
|       | :: ::::::::::::::   | ::                            | : ::::            | : : ::::     | : : : : :    | : :  |
| rat   | CAAGCAGGGACTGGACCTC----                                       | CATCCAGATAGAGGGT              | AGGACAAAGGAGCCG-- | GG           |              |      |
|       | 1760  | 1770                          | 1780              | 1790         | 1800         | 1810 |
|       | 1810  | 1820                          | 1830              | 1840         | 1850         | 1860 |
| human | GGTAGGAGCATGTGTTCTTTAGGGCC                                    | TTGTAAGGCTGTTTCCTTTTGCATCTGGA | ACTGA             |              |              |      |
|       | : ::::::::::::::  | : ::::                        | : ::::::::::      | : :::::::::: | : :::::::::: | : :  |
| rat   | GATAGGAGCATGTGTTCTTTAGGGCCACATATGGCTGTTTCCTGTTGCATCTGGAACCA   |                               |                   |              |              |      |
|       | 1820  | 1830                          | 1840              | 1850         | 1860         | 1870 |
|       | 1870  | 1880                          | 1890              | 1900         | 1910         | 1920 |
| human | CTATATAAATTGTCTTCAAGTGAAGACTAATTC                             | AATTTTGCATATAGAGGAGCCAAAGAGA  |                   |              |              |      |
|       | ::::::  |                               |                   |              |              |      |
| rat   | CTATATTGCTCTTCAGTGAAGACTGATTCAACTTTGCGTATAGTGGAGCCAAAGAGATTTT |                               |                   |              |              |      |
|       | 1880  | 1890                          | 1900              | 1910         | 1920         | 1930 |



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FIGURE 6

|   |            |           |          |           |           |                              |
|---|------------|-----------|----------|-----------|-----------|------------------------------|
| 98.425% identity (98.425% ungapped) in 381 aa overlap (1-381:1-381) |            |           |          |           |           |                              |
|   | 10         | 20        | 30       | 40        | 50        | 60                           |
| human   | MIDTLRPVPF | FASEMAISK | TVAWLNEQ | LELGNERLL | LMDCRPQEL | YESSHIESAINVAIPG             |
|   | .....      | .....     | .....    | .....     | .....     | .....                        |
| rat   | MIDTLRPVPF | FASEMAISK | TVAWLNEQ | LELGNEQLL | MDCRPQEL  | YESSHIESAINVAIPG             |
|   | 10         | 20        | 30       | 40        | 50        | 60                           |
|   | 70         | 80        | 90       | 100       | 110       | 120                          |
| human   | IMLRRLQK   | GNLPVRAL  | FTRGEDRD | RDRFTRRC  | GTDTVVLY  | DESSSDWNENTGGESLLGLLK        |
|   | .....      | .....     | .....    | .....     | .....     | .....                        |
| rat   | IMLRRLQK   | GNLPVRAL  | FTRCEDRD | RDRFTRRC  | GTDTVVLY  | DENSSSDWNENTGGESVLGLLK       |
|   | 70         | 80        | 90       | 100       | 110       | 120                          |
|   | 130        | 140       | 150      | 160       | 170       | 180                          |
| human   | KLKDEGCRA  | FYLEGGFS  | KFQAEFSL | HCETNLDG  | SCSSSPPL  | PVLGLGGLRISDSSSDI            |
|   | .....      | .....     | .....    | .....     | .....     | .....                        |
| rat   | KLKDEGCRA  | FYLEGGFS  | KFQAEFAL | HCETNLDG  | SCSSSPPL  | PVLGLGGLRISDSSSDI            |
|   | 130        | 140       | 150      | 160       | 170       | 180                          |
|   | 190        | 200       | 210      | 220       | 230       | 240                          |
| human   | ESDLDRDP   | NSATDS    | DGSPLSNS | QPSFPVEI  | LPFLYLGC  | AKDSTNLDVLEEFGIKYILNVT       |
|   | .....      | .....     | .....    | .....     | .....     | .....                        |
| rat   | ESDLDRDP   | NSATDS    | DGSPLSNS | QPSFPVEI  | LPFLYLGC  | AKDSTNLDVLEEFGIKYILNVT       |
|   | 190        | 200       | 210      | 220       | 230       | 240                          |
|   | 250        | 260       | 270      | 280       | 290       | 300                          |
| human   | PNLPNLFEN  | AGEFKYK   | QIPISDH  | WSQNLSQ   | FFPEAIS   | FIDEARGKNCGVLVHCLAGISRS      |
|   | .....      | .....     | .....    | .....     | .....     | .....                        |
| rat   | PNLPNLFEN  | AGEFKYK   | QIPISDH  | WSQNLSQ   | FFPEAIS   | FIDEARGKNCGVLVHCLAGISRS      |
|   | 250        | 260       | 270      | 280       | 290       | 300                          |
|   | 310        | 320       | 330      | 340       | 350       | 360                          |
| human   | VTVTVAYL   | MQKLNL    | SMNDAY   | DIVKMK    | KSNI      | SPNFMGQLLDFERTLGLSSPCDNRVPAQ |
|   | .....      | .....     | .....    | .....     | .....     | .....                        |
| rat   | VTVTVAYL   | MQKLNL    | SMNDAY   | DIVKMK    | KSNI      | SPNFMGQLLDFERTLGLSSPCDNRVPAQ |
|   | 310        | 320       | 330      | 340       | 350       | 360                          |
|   | 370        | 380       |          |           |           |                              |
| human   | QLYFTT     | PSNQNV    | YQVDSL   | QST       |           |                              |
|   | .....      | .....     | .....    | .....     |           |                              |
| rat   | QLYFTT     | PSNQNV    | YQVDSL   | QST       |           |                              |
|   | 370        | 380       |          |           |           |                              |

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FIGURE 7

